IN THE SPECIFICATION:

Please amend the specification as follows:

Please amend the paragraph starting on Page 4, Line 18 and continuing on Page 5, line 7 of the instant specification as follows:

Soon after the discovery of the AD method, a pulsed laser vaporization (PLV) of transition–metal/graphite composite pellets was found to produce high quality SWNT material, see P.Nikolaev et al., "Catalytic Growth of Single-Walled Nanotubes by Laser Vaporization," *Chem. Phys. Lett.* 243, 49 (1995). Various modifications of the PLV technique have been made to improve the yield of SWNTs and to elucidate the mechanism of their formation, e.g., by using double laser pulses or by dividing the target into graphite and metal halves along the cylindrical axis, see A. Thess et al., "Crystalline Ropes of Metallic Carbon Nanotubes," *Science* 273, 483 (1996) and M. Yudasaka et al., "Single-Wall Carbon Nanotube Formation by Laser Ablation using Double-Targets of Carbon and Metal," *Chem. Phys. Lett.* 278, 102 (1997). ~~Continuos~~ Continuous laser and solar irradiation produce SWNTs as well, although with lower yield, see E.Munos et al., "Structures of Soot Generated by Laser Induced Pyrolysis of Metal-Graphite Composite Targets", *Carbon*, 36, 525 (1998) and D.Laplaze et al., "Carbon Nanotubes: The solar Approach", *Carbon*, 36, 685 (1998). The optimal metal concentration in the PLV pellets is 6-10 wt.%, the same as in AD anode rods. The pellet, vaporized by laser beam, is usually maintained at 1200°C, and Ar at 500 Torr is used as carrier gas. The SWNT produced with this method form bundles, that consist of about 100 SWNTs. The SWNT yield in the PLV method can be as high as 70-90 vol.%; however, the production rate is about an order of magnitude lower compared to conventional laboratory scale arc process. The bulk rate of SWNT-containing soot production can be substantially increased by rising laser power, however, at the expense of the reduction in SWNT yield, see, for EXAMPLE, A. G. Rinzler et al., "large-scale Purification of Single-Wall Carbon Nanotubes: Process, Product, and Characterization," *Appl. Phys. A* 67, 29 (1998).

Please amend the paragraph starting on Page 10, line 6 of the instant specification as follows:

In accordance with a further embodiment, the novel DWNTs are embodied in electron emission material comprising a surface consisting primarily of emissive tubules, wherein each of ~~te~~ the plurality of emissive tubules is generally nanotube material with controlled number of graphene layers, preferably two graphene layers. In a preferred embodiment, the electron emissive materials comprises at least 70% DWNTs. Preferably, the DWNTs of the electron emissive material has a majority of its DWNTs with a diameter of 2.7nm to 5.5nm.

Please amend the paragraph beginning on Page 19, line 28 and continuing to Page 20, line 29 of the instant specification as follows:

In contrast to other types of fullerene production, notably C60 and ~~C7-0~~ C70, the DWNTs and the thick SWNTs do not require immediate participation of active small clusters C_n in their growth process, and are formed either from hydrocarbons or much more stable large carbon particulates which are the cooled down to below ca. 1500 C inactive products of entirely completed condensation of carbon vapor. In the absence of hydrocarbons and hydrogen, these are exactly amorphous particles that serve for the main carbon feedstock for nanotube production with metal catalyst particle. While studying the TEM images of DWNTs we have found a unique structure, in which a thick SWNT (2.3 nm in diameter) is incorporated in the cavity (5.0 nm in inner diameter) of a larger thin-walled tube along the entire length accessible for observation (Fig. 5d). The very existence of such structure provides a reliable proof for the capability of amorphous carbon to serve as a sole carbon feedstock for thick SWNT synthesis. Indeed, the very probable kinetic scenario for this structure formation is as follows. A large metal catalyst particle produces first the outer big tube, while leaving some amorphous carbon in the channel, which is discernible on the most of the HRTEM micrographs of the DWNTs, see for example Figures 1 and 5. At a moment a small piece was separated from big metal particle and started moving inside the channel in the opposite direction, consuming amorphous carbon and precipitating that SWNT from its rear side. The growing small tube pushes ahead the particle, thus ensuring its contact with next portions of amorphous carbon in the channel, which is much more reactive towards dissolution in metal, compared to carbon of the inner layer of the large tube. Moreover,

conversion of the carbon from inner lining of the big tube into a SWNT is thermodynamically unfavorable, and big tube is easily retained intact, especially allowing for moderately low synthesis temperature. The latter can thus be estimated as the temperature required for efficient (as the half-time of the thick SWNT is presumably below a second) dissolution of the basal plane of HOPG (highly oriented pyrolytic graphite) in metals of iron group, although the perfect structure of the tube inner layer must be less reactive than flat basal plane of HOPG. The crude assessment thus performed gives 1500 C for the upper limit of the SWNT synthesis temperature. Amorphous carbon, present in the cavity, is obviously the sole source of carbon for the growth of SWNT, as hydrocarbons from the reactor gas phase have no chance to reach the surface of the inner catalyst particle. If an excessive for balanced process amount of amorphous carbon is present in the tube, the small metal particle would precipitate the excess inside the newly formed SWNT (as is the case of tube from Fig. 5d). Alternatively, the production of DWNT instead of SWNT could get started in the tube segments rich in amorphous carbon. The DWNT growth might be implied from inspection of Fig. 5d, although without certainty because of low resolution of image details.

Please replace the paragraph starting on Page 28, line 1 of the instant specification as follows:

As a result, the yield of fibrous material has dropped down to 0.18 g (ca. 1.0 % of consumed anode). These fibers are weak and easily disintegrate into a powder by crinkling in fingers. The content of DWNTs and SWNTs in the fibrous material is about 5 %, the rest is mainly amorphous carbon and metal nanoparticles. The ratio~~n~~ DWNTs/SWNTs in the fibrous material is about 1. The wall sleeve is very loose and powdery. It contains about 1 % of carbon nanotubes, DWNTs and SWNTs.

Please replace the last paragraph of Example 3, starting on Page 28, line 13 of the instant specification as follows:

As a result, the yield of fibrous material is 0.65 g (ca. 3.5 % of consumed anode). The total yield of DWNTs and SWNTs in the fibrous material is about 60 %, the rest is amorphous carbon and metal nanoparticles (Fig.6). The amount of DWNTs and SWNTs is about equal in

the sample of the fibrous material. The same is observed in the wall sleeve material, the ratio~~n~~ DWNTs/SWNTs is about 1.

Please replace the last paragraph on Page 28, starting on line 26 of the instant specification as follows:

As a result, the yield of fibrous material is 0.88 g (ca. 5.0 % of consumed anode). The amount of DWNTs and SWNTs in the fibrous material is about 70 %, the rest is amorphous carbon and metal nanoparticles. The ratio~~n~~ DWNTs/SWNTs is about 3.0, that is one SWNT is observed per each three DWNTs on the HRSEM micrographs (Fig. 7).